

IN THE CLAIMS:

1.-18. (Canceled)

19. (Previously Presented): A device produced according to the method of making a silicon micromechanical structure, comprising the steps of:

forming a lightly doped silicon substrate having a first and second side and having less than $5 \times 10^{19} \text{ cm}^{-3}$ boron therein;

placing only a single strain compensated p+ layer on the first side of said substrate by doping with boron and germanium to form an etch stop, said p+ layer having a boron content of greater than $7 \times 10^{19} \text{ cm}^{-3}$ and a germanium content of no more than about $1 \times 10^{21} \text{ cm}^{-3}$;

forming a mask on second side for etching a predetermined pattern;

etching said second side to said p+ layer to form a silicon diaphragm;

depositing an insulator on said p+ layer; and

fabricating an electronic component as a micromechanical structure on said insulator.

20. (Previously Presented): The device of Claim 19, wherein said boron content is greater than $1 \times 10^{20} \text{ cm}^{-3}$ and the germanium content is from about $0.5 \times 10^{21} \text{ cm}^{-3}$ to about $2.0 \times 10^{21} \text{ cm}^{-3}$.

21. (Previously Presented): The device of Claim 19, wherein said micromechanical structure is a pressure sensor.

22. (Previously Presented): The device of Claim 21, wherein said electronic component is selected from the group consisting of dielectrically isolated piezoresistors and resonant microbeams.

23. (Previously Presented): The device of Claim 19, wherein said micromechanical structure is a cantilevered accelerometer.

24. (Previously Presented): The device of Claim 23, wherein said electronic component is selected from the group consisting of dielectrically isolated piezoresistors and resonant microbeams.

25. (Previously Presented): The device of Claim 19, wherein said micromechanical structure is a dual web biplane accelerometer formed by forming a said p+ layer on both sides of said substrate, forming a proof mask and flexure etching on both sides of said layer until said etching reaches said p+ layers.

26. (Previously Presented): The device of Claim 25, wherein said electronic component is selected from the group consisting of dielectrically isolated piezoresistors and resonant microbeams.

27. (Previously Presented):/ The device of Claim 19, wherein said micromechanical structure includes a dielectrically isolated piezoresistor formed on a top surface of a first wafer, a second wafer is bonded to said first wafer, and said second forms a single crystal piezoresistor.

28.-36. (Canceled)